



# THE Agricultural Situation

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# Cattle Feeding Prospects

## Brighter for Short-Term Than for Long-Term Feeding

COMPARED with a year earlier, cattle feeders filled their feed lots this past fall at substantially lower costs. Prices for feeder steers averaged more than a fourth lower. Feeders are paying about the same price for feed as a year ago. Their profits may prove better than last year—when they were below average—even though prices of the higher grades of fed cattle go down somewhat because of the larger number being fed and marketed. Severe price breaks would of course wipe out prospective profits.

The short-term feeder has a chance this year to make out as well as the long-term feeder. This is because the present conditions are a little more favorable to him than to the long-term operator. The present situation is opposite to the experience from 1946 to 1951, when profits were best from long-term feeding. During those years the generally rising cattle prices, relatively low feed costs and the narrow price spread between the upper and lower grades of slaughter steers favored the long-term feeder.

In long-term feeding operations profits arise primarily from putting on each pound of gain at a cost lower than the price the farmer gets for it when he sells the steer. Both purchase prices of feed and selling prices of fed steers thus have much to do with the size of profits.

Gradual downtrends in selling prices, such as those of the past year, are especially damaging to profits in long-term feeding. This is true because the margin over cost of gain is lowered; also because the total drop in price between the time feeders are bought and the fed cattle are sold can amount to a great deal over the longer feeding period. Costs of feed this year, as high or higher than in the last several years, also hurt the long-term feeders. Long- and short-term feeders alike paid lower prices for feeder calves and steers last fall. But we should remember that costs of feeders are a smaller part of

total costs for long-term than for short-term feeding and, therefore, low purchase prices have less effect on profits for the long-term feeder.

In short-term feeding, as contrasted with long-term, the cost of feed is relatively less important in total costs and the cost of the feeder steer is relatively more important. For this reason the short-term operator can gain the greater advantage from the reduced prices for feeder cattle this past fall.

Profits from short-term feeding this year may nearly equal those from long-term feeding in dollars per head, and will be closer to the 1946-51 average than will the long-term feeding profits.

These and other conclusions are based on an analysis of costs and returns from 4 cattle feeding programs typical of Corn Belt conditions. Miller, Earl E., "Profits from Four Different Cattle Feeding Programs," *Livestock and Meat Situation*, November-December 1952. Bureau of Agricultural Economics, U. S. Dept. of Agriculture.

Analysis of these feeding programs emphasizes that skillful buying and selling is of most benefit, proportionately, to the short-term feeder. On the other hand, efficiency of putting on gain, though it cannot be neglected by any feeder, will add more dollars to the profits of the long-term feeder.

A large movement of cattle to feed lots last summer and fall indicates a volume of cattle feeding this winter larger than ever before. Considerably more lightweight cattle have been purchased, many of them for long-term feeding. From July through November, shipments of calves and lightweight steers from 8 primary markets was 21 percent above a year earlier. Although the volume of short-term feeding is not readily apparent, contract feeding—which is generally for shorter terms—is up from last fall. Considerable numbers of lower quality steers have also been returned to feed lots during recent weeks for further feeding.

Earl E. Miller  
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# Prospects For Fertilizers And Pesticides

**I**F FARMERS are to produce big crops again this year, fertilizers and pesticides will of course play a big part. For the country as a whole, yields per acre have increased by nearly a half in the last 30 years and one of the most important factors has been the greatly expanded use of fertilizer and lime. (*Graphically shown in the August, 1952 issue of the Agricultural Situation.*) The increased use of pesticides also has played a big part.

What is the situation as to supplies this year of these important production items?

In order to take care of the increasing needs of farmers, increased facilities for the production of fertilizer have been encouraged by the Department of Agriculture; and the aggregate supply of the three primary plant nutrients available for the new year probably will exceed the record amount of last year by about 12 percent. This estimate assumes that domestic production will continue as expected, and that the usual import-export balances will prevail.

**Nitrogen:** The supply of nitrogen available for the 1952-53 crop season is presently estimated at 1,585 thousand tons. This estimate is based on current information as to when a number of new synthetic ammonia plants are expected to be completed, allows for some increased production at by-product plants, and assumes about the same import-export balance as in 1951-52. The present estimate represents an increase of slightly more than 11 percent above the reported 1951-52 supply of 1,425 thousand tons.

It is estimated that the supply of solid nitrogen materials (dry nitrogen) for 1952-53 represents approximately 62 percent of the total supply and solutions and liquid materials (wet

## Higher Farm Production Costs

COST RATES of most of the goods farmers use in producing farm products, as well as the wage rates they will have to pay, are likely to increase a little in 1953 over last year. Prices farmers receive for what they have to sell, on the other hand, probably will average slightly lower this year than in 1952. This means that farmers will again feel the effects of the price-cost squeeze.

Expenditures in 1952 were 3 to 4 percent higher than in 1951, and were the highest on record. These expenditures have risen almost every year since 1938 as both prices and the quantity of items used have increased. Prices of miscellaneous farm supplies have gone up year by year and in 1952 were the highest on record. They will average slightly higher in 1953. . . . Containers, cotton bags and bale ties are expected to be adequate. . . . Lumber and other materials used in farm construction are expected to be adequate for 1953 needs, and at or near present prices. However, barbed and woven wire fencing is expected to continue scarce through most of 1953.

nitrogen) 38 percent. For the previous year these percentages were approximately 65 and 35.

**Phosphates:** The estimated supply of phosphates available this season is about 10 percent above the 2,235 thousand tons used last season. Producers of superphosphates and related phosphatic fertilizer materials were able to overcome some of their sulfur and sulphuric acid problems during the 12 months ending June 30, 1952, with the result that production was larger than expected. Assuming some continued improvement and the availability of new sources of sulphuric acid, the supply of phosphates for 1952-53 is forecast at 2,465 thousand tons of available phosphoric oxide ( $P_2O_5$ ). An additional 300 to 350 thousand tons of total phosphoric oxide can be expected in the form of ground phosphate rock and other materials.

**Potash:** The supply of potash ( $K_2O$ ) for fertilizer purposes will reflect production by new facilities plus increases by older operating units. Some increase in imports may occur. Exports also are expected to show some increase. Taking these factors into account, it is estimated that the 1952-53 supply will be around 1,850 thousand

tons of potash. This amount is about 17 percent above the reported 1951-52 supply of 1,585 thousand tons.

Factory capacity is ample to produce all the supplies of **pesticides** needed by farmers. Supplies in 1953 are therefore expected to be adequate, provided farmers make their needs known early in the season.

The problems of distributing an adequate supply of finished pesticidal preparations to control pests of particular crops have become highly complicated. It is no longer possible to manufacture and to distribute all the pesticides needed by farmers within a few weeks before they are used. Plans, therefore, should be made as early as possible to purchase at least enough for minimum needs.

The rate of production of pesticides during the first half of 1952 was higher than during the same period a year earlier. The prolonged drought during the past summer, in a large part of the country, reduced the intensity of pest infestations, particularly in the South, and the quantity of pesticides used was less last year than in 1951. Consequently, plentiful stocks of many important pesticides have accumulated and are depressing current production of certain materials.

### **Pesticide Prices, Little Change— Fertilizers May Be Higher**

Retail prices of some important pesticides are lower than a year ago, while others are mostly unchanged. Prices in 1953, however, for most finished pesticidal preparations and mixtures are not expected to differ greatly from those in 1952.

Prices paid by farmers for fertilizer in 1953 may be 3 to 4 percent higher on the average than last year, largely as a result of increased freight rates. Since most of the fertilizer is produced in the East and Southeast, farmers in the West and Midwest, being farther away, will feel the pinch of higher prices more than will those in other areas. Farmers in the Southeast probably will pay little or no higher prices for their fertilizer than they paid last year.

Wylie D. Goodsell  
*Bureau of Agricultural Economics*

## **Outlook Highlights**

**. . . JANUARY 1953**

**O**UR ECONOMY during the past few weeks has been operating at a record rate. Output of factories and mines inched upward to new highs and farm marketings were at record rates. Higher employment, rising wage rates and a longer work week contributed to record consumer incomes. Average wholesale commodity prices held steady in November and early December, reflecting not only large demands on the economy but abundant supplies of most products.

### **Farmers Get Less From Food Dollar**

Farmers got only 46 cents of each dollar that consumers spent for farm foods in November . . . down 3 cents from a year earlier and equal to the lowest since the end of World War II. The market basket of farm foods brought \$739 at retail in November, \$7 higher than a year earlier. The farm value of the same foods, however, was \$21 or about 6 percent lower than a year earlier.

### **Farm Income**

Farmers received a total of 30.1 billion dollars from marketings during the first 11 months of 1952, or only 1 percent more than they received during the corresponding period of 1951. Prices of farm products averaged 4 percent lower than last year, but the volume of marketings was up 5 percent.

### **More Beef, Less Pork and Lamb**

There will be more beef and veal on the market this winter than last, but less pork and lamb. Price trends may be upward for hogs, possibly also for lambs. As a large number of cattle are on feed, seasonal declines are likely in prices of top grades of cattle.

### **Dairy Product Prices**

Prices farmers got in December for butterfat were below a year earlier but higher for milk delivered to plants and dealers. The price position of dairy products has improved somewhat in the past year, particularly in relation

(Continued on Page 14)

# More Machines, Fewer Horses and Fewer Men on U. S. Farms

**U**NPARALLELED changes have occurred in farming in the United States during the past 40 years. Outstanding during this period has been the tremendous increase in the use of all kinds of machinery and mechanical power.

Tractors with internal combustion engines began to be of some importance on farms during World War I, when farm labor was scarce and prices of farm products and farm incomes were high. Since that time tractor numbers have steadily increased. It is estimated that on January 1, 1952, there were about 4.2 million tractors of all kinds on United States farms . . . about 25 times the number in use at the end of World War I. Of course, as the number of tractors increased horses and mules decreased. There were only about a fourth as many horses and mules on farms in 1952 as in 1920.

Total acreage in cultivation has not changed materially since 1920. The shift from work animals to tractor power, however, has made available for food production millions of acres formerly used for horse feed, since tractors don't eat oats.

With the greatly expanded use of mechanical power, new machines and new ways of doing farm work have come into widespread use. Measures of changes in numbers of the principal farm machines, and in the ages and sizes of most of these machines, are presented in BAE report F. M. 101, "Farm Power and Farm Machines." This report is based largely on material supplied by the voluntary crop correspondents of the U. S. Department of Agriculture, and on annual shipments of farm machines as reported by the Bureau of the Census.

## Nearly a Million Combines

The farmer of today harvests his crops principally with modern machines such as the grain combine, the corn picker, the automatic windrow pick-up baler, and the field forage harvester. More than 90 percent of the 1952 acreages of small grains and soy-

## Can Farmers Get Needed Machinery This Year?

**P**ROSPECTS for farmers to get machinery in 1953 appear favorable. The availability of critical materials used in the production of farm machinery and equipment appears better this year than last year. In addition, adequate stocks of most kinds of used equipment will be available.

Last year's production of farm machinery and equipment is estimated to be somewhat less than the very high production in 1951. Shipments of farm wheel type tractors for the first 9 months of 1952 declined approximately 20 percent from the shipments in the same period in 1951. However, shipments of farm machinery other than tractors likely did not decline as much.

Prices of farm machinery rose moderately during 1951 and very slightly in 1952. With a further increase in the cost of labor and materials, some increase in prices of farm machinery might occur in 1953.

During most years of the past decade production of farm machinery has been at a high level and the number of important machines on farms has steadily increased. Along with the increase in volume of total power and machinery the number of horses and mules has decreased. Even with the reduced level of machinery output in 1952, a sufficient number of most new and used machines will be available to maintain agricultural production at a high level in 1953.

beans for grain were harvested with the grain combine. In 1920 there were only 4,000 grain combines on farms. By 1952, the number had increased to about 900,000. It might be pointed out, however, that the 1920 combines—used mainly on the extensive grain farms of the country—were much larger and harvested more acres per machine than the 1952 combines. There are still some big ones in use, but manufacturers have sought to meet the demand also of small farmers and those who have fields in out-of-the-way places, inaccessible to the heavier machines.

Sales of the grain binder, once the major grain-harvest machine, have been small during recent years. The number of these machines on farms has declined since 1942 by about 40 percent, and many of them get little or no use.



The mechanical corn picker probably harvested more than 70 percent of the 1952 acreage of corn for grain. The use of this machine was of little importance until about 1927 when the first power take-off picker came into use.

#### Many Other Power-Drawn Machines

Farmers of 1952 had large numbers of such tractor equipment as moldboard plows, disk plows, one-way disk plows, and listers and middlebusters to prepare their land for seeding. Some of these, such as the one-way disk plows and listers and busters, are used principally in the West and the South. On the other hand, the tractor moldboard plow, long the most extensively used piece of farm equipment, is reported in practically all areas of the country.

Automatic wire and twine pickup balers, forage harvesters and crop sprayers have been largely developed and put into use during the past decade. Development of new pesticides has contributed greatly to the increased use of sprayers and dusters in recent years.

Milking machines have been in use for more than half a century. But it

was in World War II, and in the years following, that their use became widespread. Nowadays, in many dairy areas there are but few dairy farms with six or more dairy cows that are not equipped for milking by machine. Use of the power equipment and new type machines have greatly reduced the labor needs for producing practically all kinds of farm products. Furthermore, power machines can be used for longer hours than can machines operated with animal power. This means farm work can usually be performed at an advantageous time.

The expanded use of mechanical power together with the new machines and equipment, have made it possible for fewer people to do the job of farming. Farm output during the past 5 years has averaged about 50 percent above that of 1920. The population of the United States since 1920 has increased by nearly 50 percent. Yet, the number of folks living on farms declined during the same period by more than 25 percent.

Albert P. Brodell  
Paul E. Strickler

Bureau of Agricultural Economics

### Numbers of principal machines on United States farms, horses and mules, and farm population, specified years

Items	1910	1920	1930	1940	1945	1950	1952
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands
Farm population.....	32, 077	31, 556	29, 447	29, 047	24, 342	24, 335	<sup>2</sup> 23, 276
Horses and mules (all ages).....	24, 211	25, 742	19, 124	14, 478	11, 950	7, 781	6, 293
Tractors (excluding steam).....	1	246	920	1, 545	2, 422	3, 615	4, 170
Motortrucks.....	0	139	900	1, 047	1, 490	2, 209	2, 410
Automobiles.....	50	2, 146	4, 135	4, 144	4, 148	4, 207	4, 350
Tractor moldboard plows.....				<sup>1</sup> 1, 469			<sup>3</sup> 2, 493
Tractor disk plows.....							<sup>3</sup> 326
Tractor listers and middlebusters.....				<sup>1</sup> 292			<sup>3</sup> 513
One-way plows.....							<sup>3</sup> 250
Grain combines.....	1	4	61	190	375	714	887
Grain binders.....				<sup>1</sup> 1, 385			<sup>3</sup> 875
Row binders.....				<sup>1</sup> 609			<sup>3</sup> 386
Corn pickers.....		10	50	110	168	456	588
Balers (stationary).....				<sup>1</sup> 128			<sup>3</sup> 90
Balers (windrow pickup).....				<sup>1</sup> 25		196	<sup>3</sup> 240
Field forage harvesters.....						81	124
Silo fillers.....							<sup>3</sup> 208
Hammer mills.....							<sup>3</sup> 689
Power elevators.....							<sup>3</sup> 479
Power sprayers.....							<sup>3</sup> 407
Power dusters.....							<sup>3</sup> 110
Farms with milking machines.....	12	55	100	175	365	636	686

<sup>1</sup> Jan. 1, 1942 figure.    <sup>2</sup> 1951 figure.    <sup>3</sup> Jan. 1, 1951 figure.

# *Insurance For Farmers At More Moderate Rates*

## **Group and Deductible Features Discussed**

FARMERS now carry more of all kinds of insurance than ever before, but they still make less use of it than do most other occupational groups. Farming is naturally a risky business and it is neither practical nor possible to insure against all or even most of its hazards. Even if insurance against all hazards were available, the premiums for it would take a significant part of one's income and add to already high fixed farming costs.

Each farmer should examine his own operations to determine the risks that are too large to face without insurance or reserves. In general, small and frequent losses should be considered as regular expenses, and not to be insured against. The possibilities of the larger but less frequent losses should be examined to find the most efficient method of protection.

It costs money to operate any kind of insurance system, but some methods are more efficient than others. Long-term or group policies reduce the cost of selling. Premium-collection costs can be reduced by several methods, and considerable expense can be saved by not insuring the smaller and more frequent losses.

### **Few Farmers Have Hospital Insurance**

More than half of the people in this country now have some kind of hospital insurance. But a recent survey indicates that in proportion to their numbers twice as many city residents use hospital insurance as do farm people. Moreover, employed city workers are three times as likely to be insured as are farm workers.

One reason for this difference in the amount of hospital insurance carried by farm and city people is its availability to most city people as group insurance. Group policies are written by many organizations affiliated with Blue Cross, other independent organiza-

tions, and by many insurance companies. A group may consist of employees in an office or factory, members of an organization, etc. Only one master policy is made out. The individual gets a certificate under the master policy. The list of people covered in the group may be revised from time to time. The premiums are sent in for all members of the group at one time. And, most important of all, the policy does not go into effect unless a large proportion of the group join in the plan. This reduces the problem of "selectivity" or the tendency for those to join who are most likely to need hospital care. Selectivity increases the cost of coverage, and the premium rate the insured has to pay.

The cost of selling group insurance and keeping it in force is less than for individual policies. By means of group hospital policies, city workers are able to budget their hospital costs as small regular payments, thus eliminating much of the financial risk of large and unexpected hospital bills.

### **"Deductible," on Group Basis**

Farmers are more accustomed to carrying their own risks and no doubt many have felt, at least until recent years, that they could not afford the cost of hospital insurance. Moreover, hospitals were not readily accessible to many farm people. But in recent years many additional hospitals have been built in predominantly rural areas. For example, 59 percent of the general hospitals built with Hill-Burton Federal aid funds were in towns of less than 5,000 population. Three out of four farm babies are now born in hospitals, as compared with only half in 1940, and one-tenth about 20 years ago.

More farmers could benefit from hospital insurance if it were more widely available to them on a group basis. Marketing and purchasing co-

operatives in a few States now offer group insurance to their farmer members at reduced rates. Premiums are deducted from members' checks or refund and are remitted in bulk to the insurance company.

Insurance costs can also be reduced by the use of deductible policies. A farm organization in Minnesota recently increased the coverage of its (group) hospital insurance from \$5 to \$7 a day, without increasing the premium rate, by requiring that the first \$25 on each hospitalization be paid by the member.

Deductible types of insurance are considerably cheaper when most of the losses are small. An individual can carry his own risk of small losses cheaper than anyone else, because in so doing there is no outside cost involved in adjusting or appraising the small losses and keeping records on them. *Insurance is best used as a means of protection against losses that are too large for the individual to bear alone.*

Experience in many lines of insurance has shown the soundness of the deductible principle. For example, an automobile collision policy on damage to your own car will cost less than half as much if you agree to pay the first \$25 of such damage, as compared with full coverage, and if you agree to pay the first \$100 on every loss, the premium is only about one-fifth of the cost of full coverage.

Many farmers carry windstorm insurance on their buildings and other farm property. Small claims are frequent in this type of insurance. They often result from damage to roofs, barn doors, etc.—sometimes as a result of poor maintenance. A windstorm policy with \$25-deductible clause costs about one-third less than full coverage, because it eliminates many upkeep or "nuisance" claims.

Insurance against hail damage to growing crops costs from 25 to 40 percent less when a 10-percent deductible provision is selected. Under this provision, a loss appraisal is made in the usual manner, but 10 percentage points are deducted from the percentage of damage to determine the percentage of the insurance that is to be paid. Thus, if hail damage amounting to 40 percent occurs to an acre insured for \$40 under a 10-percent deductible policy, 30 percent of \$40, or \$12 an acre would be payable.

The Federal all-risk crop insurance

program is another example of deductible insurance. Coverage is limited to the area—average cost of producing the crop or 60 percent of the average yield, whichever is lower. Coverage is further decreased if expenses have not been incurred for cultivating or harvesting the crop. Because the farmer carries his own risk on the smaller but more frequent reductions in yield the premium rate is reduced for protection against the loss of his investment in the crop.

In health and accident insurance involving disability-income payments, the "deductible" takes the form of a waiting period before payments start. This period is usually 7 days. As with other forms of insurance, the waiting period eliminates a relatively high proportion of the claims, reduces the cost of coverage, and makes the insurance serve its most useful purpose.

Another example of deductible insurance was offered recently by several companies in connection with various types of medical and hospital insurance. Under them, the insured bears the first \$100, \$300, or \$500 of the cost of each illness and 20 percent of any additional cost. The other 80 percent of the excess above the deductible amount is payable by the insurance company, usually up to a limit of \$5,000. At least one company also makes its deductible available as a *family-budget* amount, so that costs for all members of the family during a specified period may be applied toward satisfaction of the "deductible."

Deductible medical and hospital insurance would seem to be adapted to the needs of some farm families, provided it can be made available as group insurance. Farmers usually can pay their small medical and hospital bills but they still need some type of insurance to help them keep going when catastrophes strike.

Experience has shown that hospital and medical costs increase with advancing age, also as family incomes go up. And some families seem to want more of such services than others do. The wide variety of insurance and medical care plans now being operated will be useful guides for the future.

John C. Ellickson  
Ralph R. Botts

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# How Do You Like Your Peaches?

**D**O YOU LIKE peaches? Big luscious ones, that is? Perhaps you like yours sliced with sugar and cream. Or made into a pie. Or just eaten out of hand between meals. Or maybe you're wanting to can some for the winter ahead. However you intend to use them, it's a safe bet you want them ripe.

But when you try to buy good peaches during the peach season, it's all too often the case that you can find only peaches which are hard or shriveled-up, or bruised and mushy.

Why is this? Why can't you find in your favorite grocery the big yellow globes of tree-ripened fruit that you can get by going to a peach orchard if you are lucky enough to know of one that will sell you a small quantity—say a bushel or two.

The answer to this is a little complicated. The problem lies in the nature of the fruit itself and goes back to the orchard from which it is harvested. A peach is a very perishable product. It bruises easily. If it is picked too ripe, there is the risk of damage from bruising on the way from the orchard to the consumer. This means a loss to both grower and retailer.

## Picked Too Green

Today, most of the peaches grown in commercial orchards are picked when they are still hard and green. These peaches complete the ripening process only partially. They are never as large or as well-flavored as those that are left on the tree until they are ripe.

Is there a solution? Can peaches be left on the tree long enough so that when they reach the final consumer—the housewife—they will be at just the right degree of ripeness?

Recent studies have shown that this can be done. Peaches of uniform size and ripeness can be packed and

shipped so that they will arrive in a firm-ripe condition at the retail store. When these peaches reach the terminal market they will be *firm-ripe*, and at the retail store they will complete the ripening process. There will be less damage to the fruit on the retail counter because consumers will not need to pick over the peaches to sort out the ripe ones.

Picking the peaches at the firm stage will mean extra supervision of the harvesting crew because of the selective picking that will be required. Additional grading may be needed to guarantee a uniform ripeness. The fruit may need to be precooled to delay ripening.

## Would Cost More

All this would add up to increased costs to the grower and therefore to the grocer. There might be some risk to the grower because of too rapid ripening if unusual weather should occur. There might also be some risk to the retailer from loss of overripe fruit if sales should be slow or if he should overbuy. However, he now loses money because of the green fruit that does not sell, or that sells only at a reduced price.

Of course, you would have to pay more for the tree-ripened fruit because of these extra costs to the grower. But that consumers are willing to do this was found in the results of studies of consumer demand for ripeness of peaches made in Denver, Colo., in 1951, and in Milwaukee, Wis., in 1950.

☆ ☆ ☆

Results of these studies, which were made under the Agricultural Marketing Act of 1946 (RMA, Title II), are available in Technical Bulletin 48 of the Colorado Agricultural Experiment Station, "Consumer Demand for Ripeness of Peaches, 1950-1951."

☆ ☆ ☆

Tests were made at 11 retail food stores in Denver and at 10 in Milwaukee

during August and September. These stores were scattered about in the various sections of each city. Among them were both independent and local chain stores.

Peaches of three degrees of ripeness—ripe, firm-ripe, and firm—were placed side by side on the display counters of each store. No signs or labels other than the price mark for each lot were used. Firm-ripe peaches were priced at the normal retail price for all peaches. The ripe peaches were priced above this base price and the firm fruit was priced below the normal selling price of each store. These differences in price ranged from 1 to 7 cents a pound.

#### Demand for Ripe Peaches Considerable

About half of the peaches sold from these displays were ripe peaches, even though the price was higher. The low-

est-priced peaches—the least ripe—made up only a sixth of all peaches sold. The remaining two-sixths sold were the firm-ripe peaches.

This pattern of sales showed that half of the consumer demand in these cities was for peaches in the best eating condition, that is, for ripe peaches.

Will the premium such fruit may bring give the grower enough of a return to offset the additional handling costs? This question is still to be answered. Further study may be needed. But even though the problem of adequate returns is a real one, it seems likely that, perhaps not too far in the future, growers will pack tree-ripened fruit for "special" customers and for nearby markets. For the longer hauls, the peaches may still have to be picked green.

Esther M. Colvin  
Bureau of Agricultural Economics

### Milk Cows: Labor Requirements and Related Factors Indicated States, 1950

Size of herd	Method of milking	Idaho		Indiana		Mississippi		Pennsylvania	
		Man-hours <sup>1</sup>							
		Per cow	Per cwt. milk	Per cow	Per cwt. milk	Per cow	Per cwt. milk	Per cow	Per cwt. milk
1-4 cows -----	Hand -----	Hours 185	3.3	Hours 139	3.3	Hours 145	5.9	Hours 183	4.0
4-14 -----	Hand -----	Hours 174	3.3	Hours 132	2.7	Hours 131	4.4	Hours 166	2.8
5-14 -----	Machine -----	Hours 124	1.9	Hours 103	1.9			Hours 119	1.8
15 or more -----	Hand -----					Hours 122	3.2		
15 or more -----	Machine -----	Hours 102	1.6	Hours 94	1.6	Hours 83	2.1	Hours 114	1.6
State Average -----		Hours 136	2.2	Hours 121	2.4	Hours 135	4.8	Hours 134	2.1
Milk production per cow									
State Average -----		Pounds 6,210		Pounds 5,050		Pounds 2,789		Pounds 6,321	
Farms with milking machines <sup>2</sup>									
State—1950 (number) -----		11,782		28,121		3,463		35,292	
State—1950 (percentage of farms with milk cows having machines) -----		38		24		2		35	
State—1945 (number) -----		6,803		13,826		630		20,025	
State—1945 (percentage of farms with milk cows having machines) -----		19		10		(3)		17	
State—1945 (percentage of farms with 7 or more milk cows having machines) -----		46		31		6		39	

<sup>1</sup> From BAE publications currently being released that contain labor and power requirements for several farm enterprises in the four States. <sup>2</sup> Based on Census data. <sup>3</sup> Less than half of 1 percent.

# More Milk Per Hour of Work

## On Better Organized Farms

**A** FARMER who has only 2 or 3 cows and milks them by hand uses about 140 to 180 hours a year to feed, milk, and care for each cow. If he has around 15 cows and a milking machine, the time is reduced to around 100 hours per cow; the reduction is even greater on the large commercial herds. The small herds usually have less productive cows and less milk is obtained per hour of labor spent in taking care of them than on cows in larger herds.

Twenty years ago, labor time per cow averaged about 150 man-hours a year. Since then, increased use of milking machines has done more than anything else to reduce the time required per cow. The availability of electric power to a far greater number of farms and the fact that dairy hands have not been easy to obtain are primary reasons for the rise in number of milking machines on farms. From 1945 to 1950 the percentage of farms in the United States with milk cows that had milking machines rose from 8 to 17 percent—more than doubled.

In 1950, almost 40 percent of the farms in Idaho and Pennsylvania that had milk cows also had milking machines compared with less than 20 percent in 1945. When the figures are based on the farms that utilize a milking machine most effectively the percentage is higher. In 1945, more than 30 percent of the farms with 7 or more milk cows had milking machines in Indiana and Pennsylvania; and almost half of them in Idaho. Similar figures are not available, but the percentages are undoubtedly higher today.

### Machines Save Time, Surveys Show

Information from special surveys in four States indicates that use of milking machines on herds of 5 to 14 cows saves from 30 to 50 man-hours per cow per year. This means an annual saving of from 30 to 50 ten-hour days in herds of this size. The saving over

hand milking would be greater in larger herds. The farmers who have milking machines are more likely to have other modern equipment, such as electric milk coolers and mechanical barn cleaners, which also help to save work in dairying.

Milk production per cow and size of herd also have a direct bearing on labor requirements. With either method of milking, higher producing cows take more time but the increase in hours required is less than proportional to the rise in milk produced. This is reflected in man-hours per pound of milk. Cows in small herds produce less milk than the average and from 3 to 6 man-hours are used per 100 pounds of milk. Many fewer hours are required per hundredweight of milk in the large herds because of high production and few hours per cow. In Pennsylvania and Idaho, where average milk production is more than 6,000 pounds per cow, fewer hours are required per pound of milk than in States where average production is lower.

A milk cow in a large herd takes less time than one in small herds. Several dairy chores such as feeding roughage and bringing cows from pasture can be done for a large herd in little more time than for a small herd.

Greater use of milking machines and increase in size of commercial herds will continue to add to labor efficiency in milk production in the future. Other things, such as the kind and layout of barns and pens, also will continue to contribute to lower labor requirements. On the production side, increased milk per cow has been achieved largely through the breeding of higher producing strains of cows, the development of better pastures, feeds and methods of feeding and the working out of more effective disease control methods. These efforts should not be slackened. They will aid farmers in increasing productivity of their labor and overall efficiency in dairying.

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◀ See table, opposite page

# Pasture Opportunities In the South ... Better Balanced Farming

**F**ARMERS in the Southeast, as elsewhere, are finding that more acres of better grassland can mean more productive farms and higher incomes. The trend toward more grass and legumes is perhaps more noticeable in this region because farmers here have held out against them for a long time. They were skeptical as to their value and as to the ability of their soils to support these pasture crops.

"It's all right for other sections," some of them said. "But we can't raise those sweet grasses here."

But a variety of economic factors combined to make them change their minds. The boll weevil made it uneconomical to grow cotton on a good deal of the land that is suited to grass. Farm to city migration increased. In the last 30 years, in some States of the region, about a third of the farm population moved to towns and cities. General prosperity and the increased number of city consumers have stepped up the demand for the milk and other livestock products that are products of grassland farming.

The cost of farm labor and equipment increased and farmers found that raising grass and legumes and the extra livestock that could be added took less labor and equipment than cotton. They found that grass responds well to fertilization and that prices of fertilizers had not increased as much as those of the other commodities they bought, or of labor. Added to all these factors was the fact that prices of meat, milk, and other products of grassland have continued relatively high for a number of years.

## Educational Programs, Experimentation and New Kinds of Grass

The United States Department of Agriculture, the State agricultural experiment stations, the college extension services, and the farm papers also plugged away for better pastures. The first three experimented with different kinds of grasses and legumes on a

variety of soils. They adopted such slogans as "Blanket of Green," "Year Around Pasture," and "Grassland Farming," in an attempt to get public recognition of the advisability of more and better pastures. They developed new grasses and legumes suited to the region and improved old ones.

In the Piedmont and upper Coastal Plains areas, tall fescue, orchard grass, ladino clover, sericea lespedeza, and re-seeding of crimson clover are receiving special attention. In the lower Coastal Plains, coastal bermuda, and bahia are of special interest. The old standbys, such as Dallis grass, white Dutch clover, lespedeza, and bermuda grass are being improved. Johnson grass, the scourge of the cotton fields, and wild winter peas are used in the black belt of Alabama. For northern Georgia, some of the perennial grazing and forage crops advocated are ladino clover, orchard grass, tall fescue, alfalfa, smooth brome grass, rescue grass, trefoils, and red clover.

Farmers are finding also that better cultural practices repay them. These practices include applications of fertilizer and lime, better seedbed preparation, and mowing to retard weeds. Keeping the weeds down permits an even growth of young tender forage.

## Farmers Make It Pay

How does more and better grassland pay off? Here are some examples.

In northern Georgia, before pastures were improved, it sometimes took as many as 10 acres of native pasture to support one cow for 3 months during the broomsedge season. During this season, the flora on some of these pastures averaged 81 percent broomsedge, 9 percent weeds, 10 percent grass, and no legumes. With new seeding and fertilization, the flora changed to 60 percent legumes, 16 percent grass, 22 percent weeds, and 2 percent broomsedge. With this improved pasture, 3 acres could satisfactorily support a cow for about 8 months of the year.



In Alabama, since 1935, when the program started, more than 2,250,000 acres of permanent pastures have received some types of improvement practice. From 1935 to 1940, stress was placed on demonstrations. Untreated check plots and "check pens" were featured by the State college. Later, "Green Community Pasture Clubs" were formed in many counties. Now practically every county and every community in the State have improved pastures.

Farmers were sometimes startled at the effect on animals of the fertilizer applied to pastures. Many told of animals grazing just to the line of fertilization. Even an old family horse, blind and turned out to pasture to enjoy his old age, grazed just to the line where fertilizing had stopped and no farther.

### **Pastures Cost Money, Also Time to Get Started**

Improved pastures, of course, cannot be had without additional cost both in labor and in capital investment. The making of a pasture is one of the things that if worth doing at all is worth doing properly. It is the recognition of this fact that is causing so many southern farmers to succeed with their pastures.

A study made in the Piedmont area of South Carolina indicated that the cost of properly establishing an acre of fescue and ladino clover pasture is around \$65 to \$75, and that the cost of maintaining it is perhaps \$20 to \$25 per acre a year. The initial cost includes the cost of fencing, though not the original cost of the land.

The cost may seem high and the wait for results long, but on such pastures, when they are established, some farmers have grazed a cow per acre for most of the year. On land once considered ruined by cash cropping, fertilizer and new grasses have proved that yields of more than 300 pounds of beef can be harvested yearly from one acre, with a minimum of labor. To establish a permanent pasture usually takes from 2 to 3 years.

Although during some years and in some areas, pastures can be used throughout the year, it is not safe to depend upon doing this. In the northern part of the region, particularly, some supplemental winter feed-

ing is usually needed, even for brood cows and stockers. For example, the winter of 1949-50 was mild and little feeding of beef cattle was necessary when pasture was available. But the winter of 1950-51 was another story. From December 1 to March 15, little grazing was possible. Droughts also occur not infrequently in late summer and early fall. For these reasons, it is well to have some crops such as millet, sorghum, or kudzu to supplement the permanent pastures.

### **Much Depends On the Individual Farmer**

Not all farmers, of course, find these highly developed pastures feasible. A farmer who is considering the establishment of such pastures should take into account the size of his farm, the value of his land, its topography, the type of soil, and the kind of livestock he raises or plans to raise before he makes his decision.

The speed with which further development of pastures in the Southeast is likely to take place will depend to some extent upon the financial condition of individual farmers, upon the available credit, and upon the information and services available to them.

But the potential for further extension and development in this region is great. Much can be done in breeding new grasses. Will M. Myers, former Director of Field Crops Research for the United States Department of Agriculture, says that of the 6,000 species of grasses, we now use only a handful. He estimates that in the Southeast, through the renovation of pastures, cattle and sheep could increase by 475 percent. There is also a possibility of breeding animals designed especially for grassland agriculture. It is known that some cows, for example, make better use of forage than others.

With our increasing population, it is estimated that in less than 25 years, 5 people will sit down to the dinner table where today only 4 sit. In the South, as elsewhere, more food will be needed. Better pastures will help to put food on the dinner tables of the country.

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# Outlook Highlights

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to meat animals. As a result, the recent gradual decline in milk cow numbers may be halted in 1953.

## Poultry and Eggs

Egg production has been increasing seasonally. However, the number of layers has declined below a year ago. Despite an increase in the rate of lay-egg output next spring is expected to fall short of corresponding 1952 production.

## Broiler Prices Through December

have been well above the annual average. These better prices have helped to induce an increase in broiler chick placements.

## Feed Grains

Corn prices during the fall have been below the 1952 support level. Prices have averaged 15 to 25 cents a bushel lower than a year earlier, reflecting the bumper corn crop in the Corn Belt, but are expected to

strengthen later in the season, as marketings decline and surplus corn goes into storage.

The total supply of all feed concentrates for the 1952-53 feeding season was estimated in December at 168 million tons. This is nearly as large as last year's supply and is a little larger than last year when measured by supply per animal unit. The 1952 production of feed grains totaled 121 million tons, 7 percent larger than in 1951. A crop of this size appears adequate to meet 1952-53 requirements and may permit some increase in carry-over stocks.

## Wheat

The world wheat crop is expected to reach record high in the 1952-53 marketing season. Importing countries shared in the over-all increase in wheat supplies and world trade in wheat is expected to drop about 10 percent below the high level of 1951-52, with United States exports likely to be down by about one-third. Based on the situation in December, with prospects likely that record-large quantities of wheat would be placed under the support programs, wheat prices were expected to strengthen in early '53 from December levels.

## Prices of Farm Products

(Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. A average of reports covering the United States weighted according to relative importance of district and State)

Commodity	Average		Dec. 15, 1951	Nov. 15, 1952	Dec. 15, 1952	Effective parity price Dec. 15, 1952 <sup>1</sup>	
	Base period price <sup>1</sup>	January 1947- December 1949					
Basic commodities:							
Cotton American upland (pound).....	cents.	\$ 12.4	31.21	40.15	34.05	31.71	34.10
Wheat (bushel).....	dollars.	4.884	2.14	2.22	2.13	2.12	2.43
Rice (cwt.).....	do.	1.98	8.38	4.93	6.09	6.24	5.48
Corn (bushel).....	do.	4.642	1.64	1.68	1.45	1.50	1.77
Peanuts (pound).....	cents.	4.48	10.2	10.3	10.8	11.0	13.2
Designated nonbasic commodities:							
Potatoes (bushel).....	dollars.	\$ 1.12	1.60	1.93	2.17	1.99	\$ 1.72
Butterfat in cream (pound).....	cents.	26.7	71.2	75.7	72.3	70.1	75.0
All milk, wholesale (100 lb.) <sup>2</sup> .....	dollars.	1.68	4.42	5.19	5.33	\$ 5.19	4.72
Wool (pound).....	cents.	20.9	46.0	63.7	49.9	49.9	58.7
Other nonbasic commodities:							
Barley (bushel).....	dollars.	4.619	1.37	1.38	1.43	1.41	\$ 1.44
Cottonseed (ton).....	do.	26.40	71.60	71.50	69.70	68.50	74.20
Flaxseed (bushel).....	do.	1.65	5.54	4.24	3.75	3.75	4.64
Oats (bushel).....	do.	4.399	1.852	1.949	1.845	1.842	\$ 1.935
Rye (bushel).....	do.	.887	1.82	1.73	1.79	1.73	1.65
Sorghum, grain (100 lb.).....	do.	1.21	2.53	2.51	2.82	2.84	\$ 2.83
Soybeans (bushel).....	do.	1.00	2.84	2.83	2.71	2.75	2.81
Sweetpotatoes (bushel).....	do.	.902	2.36	3.07	3.11	3.62	2.53
Beef cattle (100 lb.).....	do.	7.36	20.20	27.30	21.30	19.70	20.70
All chickens (pound).....	cents.	11.3	29.3	24.7	26.4	26.4	31.8
Eggs (dozen).....	do.	21.5	46.6	51.1	51.9	46.6	\$ 50.2
Hogs (100 lb.).....	dollars.	7.49	21.90	17.60	16.70	16.00	21.00
Lambs (100 lb.).....	do.	8.00	21.90	28.60	20.90	19.50	22.70
Veal calves (100 lb.).....	do.	8.21	22.60	30.40	23.60	22.40	23.10
Oranges, on tree (box).....	do.	2.29	1.23	1.27	1.01	1.24	\$ 3.50
Apples (bushel).....	do.	.991	2.39	2.16	2.82	3.10	2.78
Hay, baled (ton).....	do.	11.87	22.40	24.40	26.00	26.40	\$ 27.70

<sup>1</sup> Adjusted base period prices 1910-14, based on 120-month average January 1942-December 1951 unless otherwise noted.

<sup>2</sup> Parity prices are computed under the provisions of title III, subtitle A, section 301 (a) of the Agricultural Adjustment Act of 1938 as amended by the Agricultural Acts of 1948 and 1949.

<sup>3</sup> All cotton.

<sup>4</sup> 60-month average, August 1909-July 1914.

<sup>5</sup> 10-season average 1919-28.

<sup>6</sup> Transitional parity, 85 percent of parity price computed under formula in use prior to Jan. 1, 1950.

<sup>7</sup> Prices received by farmers are estimates for the month.

<sup>8</sup> Preliminary.

# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Total income of industrial workers (1935-39=100) <sup>2</sup>	Average earnings of factory workers per worker (1910-14=100)	Wholesale prices of all commodities (1910-14=100) <sup>3</sup>	Index numbers of prices paid by farmers (1910-14=100)			Index numbers of prices received by farmers (1910-14=100)			
					Commodities	Wage rates for hired farm labor <sup>4</sup>	Commodities, interest, taxes, and wage rates	Livestock and products			
								Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	100	100	100	100	100
1915-19 average.....	72	90	152	158	149	147	148	147	153	162	157
1920-24 average.....	75	122	221	160	159	181	168	159	163	121	140
1925-29 average.....	98	129	232	143	151	184	161	161	155	145	152
1930-34 average.....	74	78	179	107	117	121	124	105	94	83	91
1935-39 average.....	100	100	199	118	124	121	125	119	108	117	115
1940-44 average.....	192	237	315	139	148	211	152	169	145	166	162
1945-49 average.....	186	317	431	204	219	407	229	264	213	291	265
1950 average.....	200	369	516	236	246	425	255	247	181	340	278
1951 average.....	220	425	566	263	271	470	281	284	226	411	335
<b>1958</b>											
January.....	221	429	582	258	275	496	287	316	200	376	320
February.....	222	430	584	257	276	-----	288	317	181	377	317
March.....	221	431	588	257	275	-----	288	305	177	372	310
April.....	216	421	574	256	276	510	289	291	180	372	306
May.....	211	421	581	255	276	-----	289	281	175	394	313
June.....	204	411	585	254	273	-----	286	277	181	380	306
July.....	193	395	573	256	273	506	286	286	208	376	312
August.....	214	435	590	257	274	-----	287	295	225	372	316
September.....	225	-----	605	256	271	-----	285	307	227	349	309
October.....	-----	-----	-----	254	269	499	282	316	228	328	301
November.....	-----	-----	-----	253	268	-----	281	318	238	310	295
December.....	-----	-----	-----	-----	267	-----	281	309	221	291	280

Year and month	Index numbers of prices received by farmers (1910-14=100)								All crops and live-stock	Parity ratio <sup>1</sup>
	Crops									
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil-bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	100	100	100	100	100	-----	100	100	100
1915-19 average.....	193	161	183	175	201	126	-----	171	164	111
1920-24 average.....	147	125	189	197	155	157	152	162	150	89
1925-29 average.....	141	118	169	150	135	146	145	143	148	92
1930-34 average.....	70	76	117	77	78	88	104	84	88	71
1935-39 average.....	94	95	172	87	113	95	95	99	107	86
1940-44 average.....	123	119	241	138	170	150	164	145	154	101
1945-49 average.....	222	205	377	240	289	216	206	234	250	109
1950 average.....	224	187	402	280	276	200	185	232	256	100
1951 average.....	243	220	436	335	339	193	239	264	302	107
1958										
January.....	251	234	431	325	303	171	337	277	300	105
February.....	249	230	436	313	296	168	217	259	289	100
March.....	251	229	435	309	284	176	265	265	288	100
April.....	250	229	435	313	279	179	308	272	290	100
May.....	245	227	436	303	280	190	285	270	293	101
June.....	238	226	437	319	289	220	250	277	292	102
July.....	230	227	436	311	307	214	287	276	295	103
August.....	236	233	436	319	310	206	229	272	295	103
September.....	240	234	428	329	305	200	182	264	288	101
October.....	240	219	429	311	304	215	189	260	282	100
November.....	248	213	412	288	300	195	238	257	277	99
December.....	247	218	428	268	300	206	256	257	269	96

<sup>1</sup> Federal Reserve Board: represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

<sup>2</sup> Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on payrolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Farm wage rates simple averages of quarterly data, seasonally adjusted.

<sup>5</sup> Revised.

<sup>6</sup> Ratio of index of prices received to index of prices paid, interest, taxes, and wage rates. This parity ratio will not necessarily be identical to a weighted average percent of parity for all farm products, largely because parity prices for some products are on a transitional basis.

<sup>7</sup> 1924 only.

# A Letter

## TO CROP REPORTERS

WASHINGTON is a very busy place about now, preparing for the inauguration. The avenue (Pennsylvania Avenue, that is) is all decked out with flags, bunting and special lights. Then there are lines of stands all the way from the Capitol to the White House. The one at the Capitol where the new President will be sworn in and the one at the White House where he will review the parade are the most elaborate. It's all very beautiful. A fellow can't help getting a bang out of it. Every inauguration is a fresh reminder of the vigor of our democratic form of government. In this free land, we vote for whom we please—and then, after the chips are down and the decision made, all of us pile right in and support our newly chosen leaders. This is the American spirit at work—and we are proud to have our share in it.

Now, I don't intend to get dramatic, but there is also a great deal of satisfaction in working for an outfit like the *Crop and Livestock Reporting Service*, because it is just about as American as electing a President and dolling up the streets to give him a royal welcome. Back about 100 years ago, a few fellows, just like you and me, were trying to figure out ways to make this free enterprise system of ours work a little better for the farmer. Let me quote part of a letter written by James T. Earle, President of the Maryland Agricultural Society, on July 16, 1855.

"For the promotion of the farming interest of the country, we are anxious to procure the earliest reliable information possible of the crops, that the same may be laid before the farmer to guide him in the selection of the best time to dispose of the fruits of his labors. The duty should properly be imposed upon an agricultural department of the general Government; but in the absence of such provision . . . the obligation is devolved upon us.

"The question arises, how shall we best discharge it? Shall we rest content, as heretofore, to do nothing? To sit with our hands before us without the effort to secure that information, which by concert of action is entirely within our

reach? The answer is but too plain and pronounced such a course to be altogether unworthy of sensible men . . . Let us, at once, so organize the societies of our respective States as to make them efficient in procuring this information so all-important to the farmers."

Sounds like he was related to Patrick Henry, doesn't it?

Well, it is now almost 100 years since that letter was written. Think a little about what Earle and his fellow farmers were up against. They worked all year and tried to survive in a competitive market without the slightest idea of what the competition was really like. And reflect, too, that the marketing of products today is so very much more competitive.

The Department of Agriculture was established in 1862 and for 90 years now we have had the Crop Reporting Service that so many seem to just "take for granted." We know, however, that it is a cooperative enterprise that really requires a lot of work if it is going to keep up with our rapidly changing markets in the present day world.

Happy New Year!

S. R. Newell  
Chairman, Crop Reporting Board, BAE

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